

CLAIMS

We claim:

1. A support structure for supporting a pre-formed concrete section having a deck and at least two legs for transport on a transport vehicle, the support structure
5 comprising:
a bolster frame including a base to be supported by the transport vehicle and a stanchion extending upwardly from the base and having a lower end connected to the base and an upper end opposite the lower end; and
a cylindrical roller connected to the upper end and supported by the
10 stanchion for rotational movement relative to the stanchion about a rotational axis, one of the legs of the concrete section intersecting the deck at an inner corner, the cylindrical roller adapted to support the concrete section at the inner corner.
2. The support structure of Claim 1, further comprising an opening near the
15 upper end of the stanchion and a shaft extending through the opening and having a first end and a second end disposed on opposite sides of the stanchion from one another, the cylindrical roller having a first roller connected to the first end and a second roller connected to the second end.
- 20 3. The support structure of Claim 1, wherein the cylindrical roller is supported by the stanchion for pivotal movement relative to the stanchion about a pivotal axis being substantially perpendicular to the rotational axis.
4. The support structure of Claim 3, further comprising a spherical bearing
25 connecting the cylindrical roller to the stanchion.
5. The support structure of Claim 3, wherein the cylindrical roller is pivotal
relative to the stanchion from a rest condition, in which the rotational axis defines a rest
axis, to a limit condition, in which the rotational axis defines a limit axis.
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6. The support structure of Claim 5, wherein an angle formed by the rest axis
and the limit axis is about 10 degrees.

7. The support structure of Claim 1, wherein the bolster frame includes a first bearing pad connected to the base for supporting one of the legs of the concrete section.

8. The support structure of Claim 7, further comprising a second bearing pad
5 removably connectable to the first bearing pad.

9. The support structure of Claim 1, wherein the base defines two elongated tubular passages for receiving the forks of a fork lift device and moving the bolster frame.

10. A trailer for transporting a pre-formed concrete section having a deck and at least two legs, the trailer comprising:

a trailer frame;

at least two wheels supporting the trailer frame;

5 a bolster frame supported by the trailer frame and having:

a base connected to the trailer frame;

a stanchion extending upwardly from the base and having a lower end connected to the base and an upper end opposite the lower end; and

10 a cylindrical roller supported by the stanchion for rotational movement relative to the stanchion about a rotational axis, one of the legs of the concrete section intersecting the deck at a corner, the cylindrical roller adapted to support the concrete section at the corner.

11. The trailer of Claim 10, further comprising an opening near the upper end
15 of the stanchion and a shaft extending through the opening and having a first end and a second end being on opposite sides of the stanchion, the cylindrical roller having a first roller connected to the first end and a second roller connected to the second end.

12. The trailer of Claim 10, wherein the cylindrical roller is supported by the
20 stanchion for pivotal movement relative to the stanchion about a pivotal axis being substantially perpendicular to the rotational axis.

13. The trailer of Claim 12, further comprising a spherical bearing connecting
the cylindrical roller to the stanchion.

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14. The trailer of Claim 12, wherein the cylindrical roller is pivotal relative to the stanchion from a rest condition, in which the rotational axis defines a rest axis, to a limit condition, in which the rotational axis defines a limit axis.

30 15. The trailer of Claim 14, wherein an angle formed by the rest axis and the limit axis is about 10 degrees.

16. The trailer of Claim 10, wherein the bolster frame is removably connected to the trailer frame.

17. The trailer of Claim 10, wherein the bolster frame includes a first bearing
5 pad connected to the base for supporting one of the legs of the concrete section.

18. The trailer of Claim 17, further comprising a second bearing pad removably connectable to the first bearing pad.

10 19. The trailer of Claim 10, wherein the base defines two elongated tubular passages for receiving the forks of a fork lift device and moving the bolster frame.

20. The trailer of Claim 10, further comprising a second bolster frame having a second stanchion and a second cylindrical roller, each bolster frame being positioned near
15 opposite ends of the trailer frame.

21. A transport vehicle for transporting a pre-formed concrete section having a deck and at least two legs intersecting the deck, the vehicle comprising:

a trailer frame;

a bolster frame supported by the trailer frame and having:

5 a base connected to the trailer frame;

a first structure extending upwardly from the base;

a second structure connected to the base, the distance from the base to the first structure being greater than the distance from the base to the second structure;

10 wherein the concrete section is supported by the first and second structure such that the concrete section has a raised side and a lowered side, the first structure engaging an inner corner at the intersection of the deck and one of the legs and supporting the raised side of the concrete section, the second structure at least partially engaging the other leg of the concrete section and supporting the lowered side of the concrete section.

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22. The transport vehicle of Claim 21, wherein the second structure engages a bottom surface of a lower end of the other of the legs of the concrete section to support the lowered side of the concrete section.

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23. The transport vehicle of Claim 21, wherein the bolster frame includes a cylindrical roller rotationally connected to an end of the first support structure opposite the base for rotation about a rotational axis relative to the first support structure, the cylindrical roller engaging the inner corner of the concrete section.

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24. The transport vehicle of Claim 21, further comprising a second bolster frame being substantially the same as the first bolster frame, each bolster frame being positioned near opposite ends of the trailer frame.

25. A method for loading a concrete double-tee having a deck and at least two legs onto a support structure having a rotational cylindrical roller supported on a stanchion, the method comprising the acts of:

5 lowering the double-tee toward the support structure, the stanchion being positioned between the legs of the double-tee;

positioning cylindrical roller adjacent an internal corner of the double-tee at an intersection of the deck and a first leg, the cylindrical roller at least partially supporting the double-tee;

10 pivoting the double-tee about the cylindrical roller toward the support structure such that the second leg moves below the first leg;

rotating the cylindrical roller relative to the stanchion about a rotational axis while pivoting the double-tee; and

resting the double-tee on a bearing pad that at least partially supports the double-tee.

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26. The method of Claim 25, further comprising the act pivoting the rotational axis of the cylindrical roller relative to the stanchion.